

What is claimed :

1. Process for the aqueous suspension polymerization of vinyl chloride with the use of dialkyl peroxydicarbonates in which the alkyl radicals contain 2 or 5 carbon atoms, characterized in that the dialkyl peroxydicarbonate is used in the form of a solution consisting essentially of the dialkyl peroxydicarbonate and of a dialkyl alkanedicarboxylate which is liquid and insoluble in water.
- 10 2. Process for the aqueous suspension polymerization of vinyl chloride according to Claim 1, characterized in that the comonomers quantity possibly used with vinyl chloride does not exceed 50 mol% of the mixture of all comonomers.
- 15 3. Process for the aqueous suspension polymerization of vinyl chloride according to Claim 1, characterized in that the dialkyl alkanedicarboxylate is chosen from the liquid esters derived from C<sub>4</sub>-C<sub>10</sub> alkanedicarboxylic acids and from C<sub>2</sub>-C<sub>12</sub> alkanols.
- 20 4. Process for the aqueous suspension polymerization of vinyl chloride according to Claim 3, characterized in that the dialkyl alkanedicarboxylate is chosen from hexanedicarboxylates (adipates) derived from adipic acid and from C<sub>6</sub>-C<sub>10</sub> alkanols.
- 25 5. Process for the aqueous suspension polymerization of vinyl chloride according to Claim 1, characterized in that the concentration of dialkyl peroxydicarbonate in the solution is from 15 to 40 % by weight.
- 30 6. Process for the aqueous suspension polymerization of vinyl chloride according to Claim 1, characterized in that diethyl or diisopropyl peroxydicarbonate is used in the form of a solution in a hexanedicarboxylate (adipate) derived from adipic acid and from a C<sub>6</sub>-C<sub>10</sub> alkanol.
- 35 7. Process for the aqueous suspension polymerization

of vinyl chloride according to Claim 1, characterized in that the polymerization is initiated exclusively with the use of dialkyl peroxydicarbonates in which the alkyl radicals contain 2 or 3 carbon atoms.

- 5 8. Process for the manufacture of a solution of dialkyl peroxydicarbonate in which the alkyl radicals contain 2 or 3 carbon atoms, characterized in that, in a first stage, a dialkyl peroxydicarbonate in which the alkyl radicals contain 2 or 3 carbon atoms is manufactured by reacting, in water, appropriate quantities of alkyl haloformate with an inorganic peroxide in the presence of an inorganic salt added in sufficient quantity to increase the density of the aqueous reaction mixture and, in a second stage, the dialkyl peroxydicarbonate manufactured is isolated by extraction by means of a water-insoluble solvent in order to produce a solution of dialkyl peroxydicarbonate in this solvent.
- 10 9. Process for the manufacture of a solution of dialkyl peroxydicarbonate in which the alkyl radicals contain 2 or 3 carbon atoms according to Claim 8, characterized in that the inorganic salt is used in a quantity which is sufficient to bring the density of the aqueous reaction medium to a value of at least 1.05.
- 15 10. Process for the manufacture of a solution of dialkyl peroxydicarbonate in which the alkyl radicals contain 2 or 3 carbon atoms according to Claim 8, characterized in that the inorganic salt is sodium chloride.
- 20 11. Process for the manufacture of a solution of dialkyl peroxydicarbonate in which the alkyl radicals contain 2 or 3 carbon atoms according to Claim 8, characterized in that the water-insoluble solvent is chosen from the water-insoluble organic compounds chosen from the usual plasticizers for polyvinyl chloride.
- 25 12. Process for the manufacture of a solution of dialkyl peroxydicarbonate in which the alkyl radicals

contain 2 or 3 carbon atoms according to Claim 11, characterized in that the water-insoluble solvent is chosen from dialkyl alkanedicarboxylates derived from C<sub>4</sub>-C<sub>8</sub> alkanedicarboxylic acids and from C<sub>6</sub>-C<sub>10</sub> alkanols.

5 13. Process for the manufacture of a solution of dialkyl peroxydicarbonate in which the alkyl radicals contain 2 or 3 carbon atoms according to Claim 12, characterized in that the water-insoluble solvent is chosen from hexanedicarboxylates (adipates) derived from  
10 adipic acid and from a C<sub>6</sub>-C<sub>10</sub> alkanol.

14. Process for the manufacture of a solution of dialkyl peroxydicarbonate in which the alkyl radicals contain 2 or 3 carbon atoms, characterized in that, in a first stage, a dialkyl peroxydicarbonate in which the  
15 alkyl radicals contain 2 or 3 carbon atoms is manufactured by reacting, in water, appropriate quantities of alkyl haloformate with an inorganic peroxyde in the presence of an inorganic salt in sufficient quantity to increase the density of the  
20 aqueous reaction mixture and, in a second stage, the dialkyl peroxydicarbonate manufactured is isolated by extraction by means of a water-insoluble solvent, chosen from the water-insoluble organic compounds chosen from the usual plasticizers for polyvinyl chloride, in order  
25 to produce a solution of dialkyl peroxydicarbonate in this solvent.